2SK2421

External dimensions 1 ..... FM20

Absolute Maximum Ratings (Ta = 25°C)

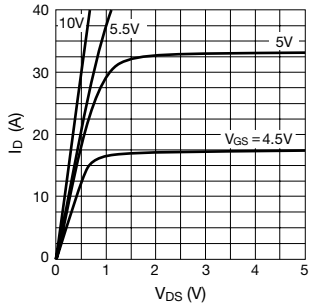
Symbol	Ratings	Unit
V_{DSS}	60	V
V_{GSS}	±20	V
I_D	±40	A
$I_{D\ (pulse)}$ *1	±160	A
P_D	40 (Tc = 25°C)	W
E_{AS} *2	60	mJ
I_{AS}	40	A
Tch	150	°C
Tstg	–55 to +150	°C

*1: $P_W \leqq 100\mu s$, duty cycle ≦ 1%
*2: $V_{DD} = 20V$, $L = 50\mu H$, $I_L = 40A$, unclamped, $R_G = 50\Omega$, See Figure 1 on Page 5.

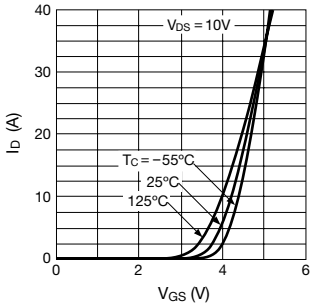
Electrical Characteristics (Ta = 25°C)

Symbol	Ratings min	Ratings typ	Ratings max	Unit	Conditions
$V_{(BR)\ DSS}$	60			V	$I_D = 100\mu A$, $V_{GS} = 0V$
I_{GSS}			±100	nA	$V_{GS} = \pm 20V$
I_{DSS}			100	μA	$V_{DS} = 60V$, $V_{GS} = 0V$
V_{TH}	2.0		4.0	V	$V_{DS} = 10V$, $I_D = 1mA$
$Re_{(yfs)}$	18	25		S	$V_{DS} = 10V$, $I_D = 20A$
$R_{DS\ (on)}$		17.5	20	mΩ	$V_{GS} = 10V$, $I_D = 20A$
Ciss		2400		pF	$V_{DS} = 25V$, f = 1.0MHz, $V_{GS} = 0V$
Coss		950		pF	
t_{on}		400		ns	$I_D = 20A$, $V_{DD} \fallingdotseq 30V$, $R_L = 1.5\Omega$, $V_{GS} = 10V$, See Figure 2 on Page 5.
t_{off}		195		ns	

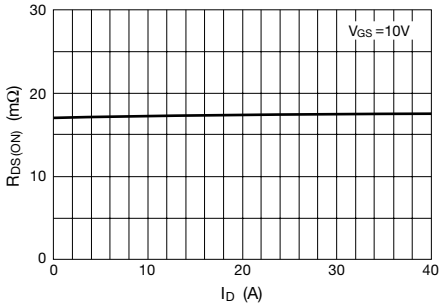
V_{DS} — I_D Characteristics



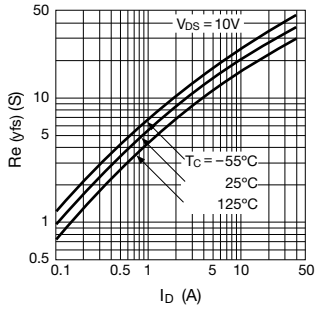
V_{GS} — I_D Characteristics



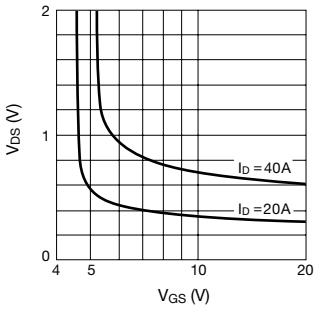
I_D — $R_{DS\ (ON)}$ Characteristics



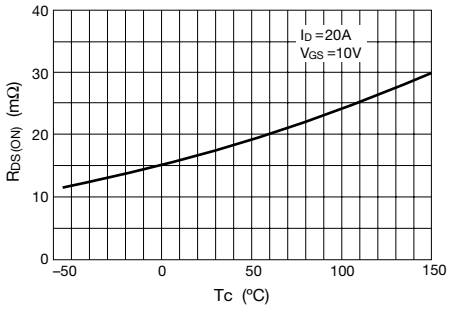
I_D — $Re_{(yfs)}$ Characteristics



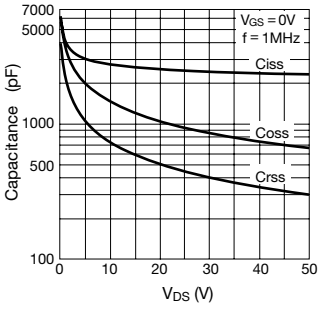
V_{GS} — V_{DS} Characteristics



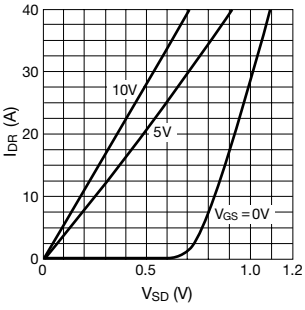
T_C — $R_{DS\ (ON)}$ Characteristics



V_{DS} — Capacitance Characteristics



V_{SD} — I_{DR} Characteristics



Ta — P_D Characteristics